

Listing of the claims:

- 1-2 (Cancelled)
3. (Currently Amended) A jaw crusher as claimed in claim ~~4~~5, in which the predetermined value is between 300 and 500 bar.
4. (Cancelled)
5. (Currently Amended) A jaw crusher for crushing material, the jaw crusher comprising: a frame having a pair of opposing walls; a fixed jaw and a swing jaw disposed between said walls, the jaws defining a crushing chamber for receiving material to be crushed, the swing jaw mounted for cyclic movement in the direction of the fixed jaw a cross beam having first and second surfaces facing in opposite directions to one another, the cross beam adjustably disposed in a transverse axis of the frame; a toggle plate mounted in operative communication between a rear portion of the swing jaw and a first face of the cross beam wherein an hydraulic cylinder arrangement is on the opposite side of the cross beam from the toggle plate, in operative communication with a second face of the cross beam, and wherein the hydraulic cylinder arrangement is pressurised to a predetermined value greater than zero, in use, to provide an adjustable, pre-loaded reaction against the toggle plate wherein the hydraulic cylinder arrangement includes two cylinders, one on either side of the frame, with the longitudinal axis of each cylinder arranged in the same plane as a respective wall. A jaw crusher as claimed in claim ~~4~~, in which an aperture is provided in each wall for movably receiving a respective end of the cross beam and the cylinders are each mounted in a respective aperture.
6. (Previously Presented) A jaw crusher as claimed in claim 5, in which the cylinders have an end profile adapted for complementary abutment with the internal surface of the apertures.

7. (Currently Amended) A jaw crusher as claimed in claim ~~4~~ 5, wherein an hydraulic circuit is provided in communication with the hydraulic cylinder arrangement, for supplying pressure to the hydraulic cylinder arrangement.

8. (Previously Presented) A jaw crusher as claimed in claim 7, wherein the hydraulic circuit includes a relief valve for releasing pressure from the hydraulic cylinder arrangement.

9. (Currently Amended) A jaw crusher as claimed claim ~~4~~ 5, wherein means are provided for adjusting the spacing between the jaws.

10. (Previously Presented) A jaw crusher as claimed in claim 9 wherein the means for adjusting the spacing between the jaws are in the form of shim packs or wedges.

11. (Currently Amended) A jaw crusher as claimed in claim ~~4~~ 5, wherein the hydraulic cylinder arrangement is pre-loaded against a part of the frame.

12. (Currently Amended) A jaw crusher as claimed in claim ~~4~~ 5, wherein the frame provides a reaction to the action of hydraulic cylinder arrangement.

13. (Currently Amended) A jaw crusher as claimed in claim ~~4~~ 5, wherein the hydraulic cylinder arrangement is in operative engagement with the second face of the cross beam.

14. (Previously Presented) A jaw crusher comprising;  
a frame having a fixed jaw and a swing jaw, which define a crushing chamber for receiving material to be crushed, the swing jaw being mounted for cyclic movement in the direction of the fixed jaw;

a cross beam adjustably disposed in the transverse axis of the frame; a toggle plate for operative communication between a rear portion of the swing jaw and a first face of the cross beam;

an hydraulic cylinder arrangement provided in operative communication with an opposite, second face of the cross beam, and wherein, in use, the hydraulic cylinder arrangement is pressurized to a predetermined value to provide an adjustable, pre-loaded reaction against the toggle plate; and

wherein the hydraulic cylinder arrangement comprises a first cylinder mounted in an aperture on a first side of the frame and a second cylinder mounted in an aperture on a second side of the frame.

15. (Previously Presented) A jaw crusher according to claim 14, wherein the predetermined value is between 300 and 500 bar.

16. (Previously Presented) A jaw crusher according to claim 14, wherein the frame includes a pair of opposing walls, with an aperture provided in each wall for movably receiving a respective end of the cross beam, and wherein the first and second cylinders are mounted in a respective aperture.

17. (Previously Presented) A jaw crusher according to claim 16, wherein the cylinders have an end profile adapted for complementary abutment with an internal surface of a respective aperture.

18. (Previously Presented) A jaw crusher according to claim 14, wherein an hydraulic circuit is provided in communication with the hydraulic cylinder arrangement, for supplying pressure to the hydraulic cylinder arrangement.

19. (Previously Presented) A jaw crusher according to claim 18, wherein the hydraulic circuit includes a relief valve for releasing pressure from the hydraulic cylinder arrangement.

20. (Previously Presented) A jaw crusher according to claim 14, wherein spacer means are provided for adjusting the spacing between the jaws.

21. (Previously Presented) A jaw crusher according to claim 20, wherein the spacer means are in the form of shim packs or wedges.

22. (Previously Presented) A jaw crusher according to claim 14, wherein the hydraulic cylinder arrangement is in operative engagement with the second face of the cross beam.

23. (Previously Presented) A jaw crusher for crushing material the jaw crusher comprising:

a frame having a pair of opposing walls; a fixed jaw and a swing jaw disposed between said walls, the jaws defining define a crushing chamber for receiving material to be crushed, the swing jaw mounted cyclic movement in the direction of the fixed jaw;

a cross beam having first and second surfaces facing in opposite directions to one another, the cross beam adjustably disposed in a transverse axis of the frame;

a toggle plate mounted in operative communication between a rear portion of the swing jaw and a first face of the cross beam wherein an hydraulic cylinder arrangement is on the opposite side of the cross beam from the toggle plate, in operative communication with a second

face of the cross beam, and wherein the hydraulic cylinder arrangement is pressurized to a predetermined value to provide an adjustable, pre-loaded reaction against the toggle plate wherein the hydraulic cylinder arrangement includes two cylinders, one on either side of the frame, with the longitudinal axis of each cylinder arranged in the same plane as a respective wall; and

wherein an aperture is provide in each wall for movably receiving a respective end of the crossbeam, and the cylinders are each mounted in a respective aperture.

24. (Previously Presented) A jaw crusher as claimed in claim 23, in which the predetermined value is between 300 and 500 bar.

25. (Previously Presented) A jaw crusher is claimed in claim 23, in which the cylinders have an end profile adapted for complementary abutment with the internal surface of the aperture.

26. (Previously Presented) A jaw crusher as claimed in claim 23, wherein an a hydraulic circuit is provided in communication with the hydraulic cylinder arrangement, for supplying pressure to the hydraulic cylinder arrangement.

27. (Previously Presented) A jaw crusher as claimed in claim 26, wherein the hydraulic circuit includes a relieve valve for releasing pressure from the hydraulic cylinder arrangement.

28. (Previously Presented) A jaw crusher as claimed in claim 23, wherein shim packs or wedges are provided for adjusting the spacing between the jaws.

29. (Previously Presented) A jaw crusher as claimed in claim 23, wherein the hydraulic cylinder arrangement is pre-loaded against a part of the frame.

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30. (Previously Presented) A jaw crusher as claimed in claim 23, wherein the frame provides a reaction to the action of hydraulic cylinder arrangement.

31. (Previously Presented) A jaw crusher as claimed in claim 23, wherein the hydraulic cylinder arrangement is in operative engagement with the second face of the cross beam.